

REMARKS

Claims 9-12, and 14-18 are currently pending in this application. By this amendment, claim 9 has been amended. Claims 9, 12, and 14 are the remaining independent claims.

Applicant respectfully submits that the above amendments do not add new matter to the application and are fully supported by the specification at least at page 5, first paragraph.

In view of the above amendments and the following Remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Preliminary Matters

Applicant believes that a three (3) month extension of time is required at this time extending the period for responding to August 23, 2005. A petition for a three-month extension of time is attached hereto. If further extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a). Applicant believes that no further fees for net addition of claims are required at this time. Any fees required for extensions of time and any fees for the net addition of claims are hereby authorized to be charged to Deposit Account No. 503310.

Rejections Under 35 U.S.C. § 102

Claims 9-12, and 14-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U. S. Patent No. 6,656,238 issued to Rogers, ("Rogers"). Applicant respectfully traverses this rejection for at least the following reasons.

Rogers discloses methods for making carbon foam. The Examiner asserts that since Rogers '238 appears to meet all the structural limitations and chemistry of the claim, therefore the dielectric constant and electrical resistivity would be inherently present. Applicant disagrees.

Missing from Rogers is the disclosure or teaching of how to produce carbon foam with the claimed dielectric constant and the claimed electrical resistivity that may be used as a radar emissions absorbing material. Applicant directs the Examiner to page 5, first paragraph of the present application where it discusses an embodiment for producing carbon foam with the claimed dielectric constant and electrical resistivity from particulate coal. Rogers '238 simply does not disclose or teach how to make carbon foam with the claimed dielectric constant and electrical resistive properties. Due to the wide range of variables involved in making carbon foam, including but not limited to starting materials and processing conditions, the properties of the resulting carbon foam will vary depending on how the carbon foam was prepared and treated. Figure 2 illustrates this point with respect to heat treatment temperature and the resulting electrical resistivity. Figure 1 also illustrates this point with respect to the carbon content of the carbon foam and the dielectric constant. Since the properties of carbon foam may vary depending upon how the carbon foam was made, the claimed parameters for the electrical resistivity and dielectric constant will not necessarily be present. Rogers '238 does not disclose these parameters for carbon foam having the claimed electrical resistivity and dielectric constant.

Accordingly, Since the all the limitations of claims 9-12 and 14-18 are not present in Rogers '238, Applicant respectfully requests withdrawal of the 35 U.S.C. § 102(e) rejection. Since the references of record do not disclose or suggest all the features of the claimed invention, Applicant respectfully submits that independent claims 9, 12, and 14, and all the claims that depend therefrom are allowable.

Claims 9-12, and 14-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U. S. Patent No. 6,673,328 issued to Klett, ("Klett"). Applicant respectfully traverses this rejection for at least the following reasons.

Nowhere does Klett teach or suggest carbon foam having the claimed properties, or how one would obtain carbon foam with the claimed properties. The Examiner asserts that Klett meets all the structural limitations and chemistry as required by the claims and that the dielectric constant and electrical resistivity would be inherent. Applicants disagree. While Klett is producing a carbon foam, Klett does not disclose a carbon foam with the claimed properties. It cannot follow the properties of the carbon foam in Klett would necessarily be inherent because 1) Klett is using different materials (mesophase pitch) and 2) Klett is using different processing conditions (see Example 1 cited by the Examiner). In fact the Example relied upon by the Examiner heats to 2500°C and produces a graphitized carbon foam. Klett simply does not teach the claim limitation of claims 12, 14, and 15.

Accordingly, Since the all the limitations of claims 12, 14, and 15 are not present in Klett '328, Applicant respectfully requests withdrawal of the 35 U.S.C. § 102(e) rejection. Since the references of record do not disclose or suggest all the features of the claimed invention, Applicant respectfully submits that independent claims 12 and 14, and all the claims that depend therefrom are allowable.

Rejections Under 35 U.S.C. § 103

Claims 9-11 and 14-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U. S. Patent No. 5,888,469 issued to Stiller, et al., ("Stiller") or in the alternative, under 35 U.S.C. § 103(a) as obvious over the Stiller. Applicant respectfully traverses this rejection for at least the following reasons. Applicant reiterates and incorporates by reference all of the previous arguments made with respect to this reference. Applicant has amended claim 9 to be commensurate in scope with respect to the carbonizing temperature of from about 600°C to about 800°C. As discussed in the previous reply, Stiller does not disclose carbonizing in this range.

With respect claim 9 not providing a patentably distinct article, as discussed above variables such as starting material and processing conditions play a role in the properties of the resulting carbon foam. Stiller, like all the other references of record, does not disclose or teach how to obtain a carbon foam with the claimed dielectric constant and claimed electrical resistivity that would allow the carbon foam to be used as a radar emissions absorbing material. Stiller is void of any disclosure with respect to heating particulate coal in a pressurized non-oxidizing atmosphere having a pressure in the range of about 50 psi to about 500 psi, to a temperature ranging from about 300 to about 600°C to form a green foam. As discussed above Stiller does not heat coal particles. Stiller heats a specific material that was solvent extracted from coal particles. It is this extract that is used to form the resulting material not particulate coal. Based on the evidence of record, Applicant respectfully asserts that carbon foam having these properties is a patentable distinct article. The fact that different starting materials and different processing conditions are used is strong indicators that the resulting products, i.e., properties of the carbon foam, will also differ.

Claim 9 is directed to the product made by a particular method, while claims 12 and 14 specifically claim the carbon foam with the desired dielectric constant and desired electrical resistivity. Accordingly, for the reasons stated above and in the previous reply, Applicant respectfully submits that the Stiller reference does not inherently provide all the limitation of independent claim 9, 12 or 14.

Accordingly, since the all the limitations of claim 9, 12 and 14 are not present in Stiller, Applicant respectfully requests withdrawal of the 35 U.S.C. § 102(b) / § 103(a) rejection of claims 9, 12 and 14. Since the prior art of record does not disclose or suggest all the features of the claimed invention, Applicant respectfully submits that independent claims 9, 12 and 14, and all the claims that depend therefrom are allowable.

Further, claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Stiller in view of U.S. Patent No. 6,673,328, issued to Klett et al., ("Klett"). Applicant traverses for at least the following reasons.

Applicant incorporates all the previous arguments made with respect this rejection. As discussed above with respect to Stiller and Klett, the starting materials and processing conditions effect the properties of the resulting carbon foam. Processing conditions and starting materials have an effect on the resulting properties of the carbon foam. Stiller and Klett have not disclosed, taught, or suggested how to make a carbon foam with claimed dielectric constant and claimed electrical resistivity. Any alleged inherency cannot necessarily be true because the starting materials and processing conditions are different. The Examiner wishes to point to one property, thermal insulating properties to "show how the two reference are related to one another and thus the combination of the teachings or the two cited references to arrive at the presently claimed subject matter is strong and proper." Applicant reiterates the claim 12 is directed to the

dielectric constant and electrical resistivity of the carbon foam, not the thermal insulating properties. Even if Stiller and Klett were combined, the claimed dielectric constant and electrical resistivity of the carbon foam are missing as well as any teaching of how to make carbon foam with these claimed parameters. Klett produces a graphitized material and Stiller heats above the carbonizing range for producing the claimed electrical resistivity and dielectric constant from particulate coal. Neither of reference taken singly or in combination teach, disclose, or suggest how to arrive at a carbon foam with the properties of claim 12. Unless one assumes that all carbon foams are identical, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness because the cited art references do not teach each and every element of the claimed invention. As discussed above the properties of the carbon foam are effected by starting material and processing conditions, i.e., not all carbon foams are alike. Accordingly, the Applicant respectfully requests reconsideration and withdrawal of the present rejection of claim 12.

Next, the Examiner has rejected claims 12, 14 and 15 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,999,385, issued to McCullough, Jr. et al., ("McCullough") or in the alternative under 35 U.S.C. § 103(a) as obvious over McCullough. Applicants respectfully traverse this rejection and request reconsideration.

McCullough discusses stabilizing a polyacrylonitrile foam by heating the polymer foam under inert conditions to a temperature ranging from about 150°C to about 525°C and references the manner disclosed in U.S. Patent No. 4,837,076 (directed to fibers where the heat treatment is to further cross-link the material) followed by heating to temperatures ranging from 175°C to 1500°C. Like all the reference above, McCullough is specifically missing the dielectric constant limitation. Further, like all the references discussed above, since McCullough is using different

materials and different processing conditions the resulting material produced is likely different as well. None of the references of record disclose, teach or suggest a carbon foam material having the claimed properties.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. § 102(b) / § 103(a) rejection of claims 12 and 14. Since the prior art of record does not disclose or suggest all the features of the claimed invention, Applicant respectfully submits that independent claims 12 and 14 and all the claims that depend therefrom are allowable.

Rejection under Obviousness – Type Double Patenting

The Examiner has rejected claims 9-11 and 14-18 under the judicially created doctrine of obviousness-type double patenting for a variety of positions as articulated in paragraphs 12 – 20 of the Office Action. Applicant respectfully requests that these obviousness-type double patenting rejections be held in abeyance until allowable claims are indicated by the Examiner. Subsequently, if necessary, the Applicant will file a terminal disclaimer to overcome the rejections.

CONCLUSION

Applicant submits that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is thus respectfully requested to pass the above application to issue.

Should the Examiner feel that there are any issues outstanding after consideration of this response; the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution. Prompt and favorable consideration of this Reply is respectfully requested. Applicant respectfully requests that a timely Notice of Allowance be issued for this application.

Respectfully submitted,



Philip D. Lane
Reg. No. 41,140

Date: August 23, 2005

Philip D. Lane
P.O. Box 651295
Potomac Falls, Virginia 20165-1295
Tel: 703-201-6543
Fax: 703-723-7732